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Stephan Lietz

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EXAMINER

STIGLIC, RYAN M

ART UNIT

PAPER NUMBER

2111

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,510	Applicant(s) LIETZ ET AL.	
	Examiner RYAN M. STIGLIC	Art Unit 2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 5/23/06 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/23/06</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 8-15 are pending and have been examined.
2. Claims 8-15 are rejected.

Duty to Disclose

3. Applicant has described IEEE 1394 Draft Version 1.04 on page 3, line 12 of the substitute specification filed May 23, 2006 as being prior art, but has provided no further information regarding said prior art. Applicant is reminded that each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in 37 CFR 1.56. Applicant is advised to submit any information material to patentability in accordance with 37 CFR 1.97 and 1.98 including but not limited to copending patent applications.

Drawings

4. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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Figure 1 is described in the background information section of applicant's disclosure while Figure 2 is referred to as "an architecture model for a network bridge according to IEEE 1394 Draft Version 1.04" (see page 3, lines 11-31 of the substitute specification).

Specification

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

6. The abstract of the disclosure is objected to because of the use of legal phraseology (e.g. means). Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claim 11 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the

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specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 11 makes reference to data being exchanged between the routing nit and one of the link and transaction layer according to IEEE 1394.1, however as of the filing of the international application November 19, 2004, IEEE 1394.1 had not been approved for standardization. The IEEE 1394.1 standard has not approved until July 1, 2005 and printed under the name IEEE 1394.1-2004.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 8-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "useful data" in claim 8 is a relative term which renders the claim indefinite. The term "useful data" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The term "useful data" does not particularly define the *metes and bounds* of the claims because there exists no definite meaning of "useful".

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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12. Claims 8-14 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Application Publication No. 2003/0053466 (hereinafter Bizet).

For claim 8 Bizet discloses:

A network bridge comprising:

- at least one arrangement for configuration and control of the network bridge (*Fig. 7, 391; "The configuration of all modules is done by the central processing unit or SPU 391 through the bus interface 370" [paragraph 0260].; and*
- at least one interface (*Fig. 7, 370*) for providing access to at least some functional blocks of the network bridge (*The CPU 391 is provided access to the functional blocks/modules [e.g. 310-360] through the interface 370 [paragraph 0260].*) for polling and evaluation of at least one of useful data, operating data, and parameters , and for manipulation of the at least one of useful data, operating data, and parameters, and of the functional blocks, as a function of the evaluation (*FIFO memories are established in a DPRAM 330 [Fig. 7; paragraph 0258] in order to transfer data to/from the IEEE 1394 network. The size of the FIFO memories are dynamically computed an instantiated on an as needed basis [see paragraphs 0310-327]. Therefore, the evaluation of isochronous data enables the network bridge to manipulate the structure of the functional blocks [e.g. FIFOs].).*

For claim 9 Bizet discloses:

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The network bridge according to claim 8, wherein the network bridge is for coupling serial IEEE 1394 buses (*The network bridge connects to IEEE 1394 buses through an IEEE 1394 interface 350 [Fig. 7].*).

For claim 10 Bizet discloses:

The network bridge according to claim 8, wherein the at least one arrangement includes a software layer within a network bridge architecture (*As previously noted, the configuration of all modules of the network bridge is handled by the CPU 391. Since the CPU is under the control of software instructions, the instructions running on the CPU and controlling the manipulation of functional blocks represent a software layer.*).

For claim 11 Bizet discloses:

The network bridge according to claim 9, wherein, in addition to the functional blocks of the network bridge according to IEEE 1394, routing maps and a routing unit are provided for each connectable bus, information about a topology and node addresses in one of respective connectable buses and networks being provided in the routing maps, and data being exchanged via the routing unit between one of a link and transaction layer according to IEEE 1394.1 and a network bridge temporary memory (*The bridge module 360 [Fig. 7] of the network bridge comprises the routing maps [e.g. routing table; see paragraph 0261] and uses the routing maps to manipulate packets such that they may be transmitted to their appropriate destination [see paragraph 0261 and 0262-0270]. Also, as previously noted FIFO memories temporarily store data that is transferred through the network bridge [see paragraph 0258].*).

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For claim 12 Bizet discloses:

The network bridge according to claim 8, wherein a configuration of resources, including at least one of memory capacity and line capacity, is a function of varying operating parameters (*As previously noted, FIFO memories are established in a DPRAM 330 [Fig. 7; paragraph 0258] in order to transfer data to/from the IEEE 1394 network. The size of the FIFO memories are dynamically computed and instantiated on an as needed basis [see paragraphs 0310-327]. Therefore, the evaluation of isochronous data enables the network bridge to manipulate the structure of the functional blocks [e.g. FIFOs].*).

For claim 13 Bizet discloses:

The network bridge according to claim 12, wherein an allocation of memory regions, including a temporary memory for data to be transported via the network bridge, is a function of a statistical evaluation of a data volume for different data types including at least one of asynchronous and isochronous data (*As noted above, FIFO memories are established in a DPRAM 330 [Fig. 7; paragraph 0258] in order to transfer data to/from the IEEE 1394 network. The size of the FIFO memories are dynamically computed and instantiated on an as needed basis [see paragraphs 0310-327]. Therefore, the evaluation of isochronous data enables the network bridge to manipulate the structure of the functional blocks [e.g. FIFOs].*).

For claim 14 Bizet discloses:

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The network bridge according to claim 13, wherein, in the event of at least one of (a) a defect in one of a connected bus and network and (b) an attack by an unauthorized person, at least one of (c) a transfer of data is halttable and (d) one of a relevant bus and a connected device is deactivatable (*Bizet discloses [paragraph 190] that when a defect in the network is detected [e.g. a node is connected/disconnected] the node is deactivated by updating the routing tables.*).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bizet.

As noted above, Bizet discloses a network bridge comprising: at least one arrangement for configuration and control of the network bridge (*Fig. 7, 391; "The configuration of all modules is done by the central processing unit or SPU 391 through the bus interface 370" [paragraph 0260].*; and at least one interface (*Fig. 7, 370*) for providing access to at least some functional blocks of the network bridge (*The CPU 391 is provided access to the functional blocks/modules [e.g. 310-360] through the interface 370 [paragraph 0260].*) for polling and evaluation of at least one of useful data, operating data, and parameters, and for manipulation of the at least one of useful data, operating data, and parameters, and of the functional blocks, as a function of the evaluation (*FIFO memories are established in a DPRAM 330 [Fig. 7; paragraph 0258] in order*

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to transfer data to/from the IEEE 1394 network. The size of the FIFO memories are dynamically computed and instantiated on an as needed basis [see paragraphs 0310-327]. Therefore, the evaluation of isochronous data enables the network bridge to manipulate the structure of the functional blocks [e.g. FIFOs].). While Bizet discloses a network bridge that manipulates functional blocks as a function of the evaluation they do not disclose the network bridge of figure 7 has a further software layer which a network operator can control functions of the network bridge.

Bizet teaches that in homogeneous networks (*Fig. 1*) a controller **C** instantiates the FIFO memories of the homogeneous network bridge such that FIFO memories are created to meet the requirements of streaming connections (*see paragraphs 0219-0243*). In order to instantiate the FIFO memories of a homogeneous network bridge from a remote location, the network bridge would have had a network layer established such that the controller **C** would be given access to the internal workings of the network bridge.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement a network layer in the network bridge of Bizet such that a network controller could remotely instantiate FIFO memories in the event that the network bridge does not accurately instantiate FIFO memories for the streaming connections. By remotely determining FIFO memory sizes and instantiating the FIFO memories in the controller **C** in the situation where the network bridge does not accurately create the FIFO memories allows the network bridge to function without error thereby increasing system/network performance.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. US Patent No. 7,043,594 and US Patent Application Publication No. 2003/0188081 discloses a local bus bridge to connect IEEE 1394 busses.
- b. US Patent No. 7,007,078 discloses a local bus bridge to connect IEEE 1394 busses.
- c. US Patent No. 6,519,671 discloses a local bus bridge to connect IEEE 1394 busses.
- d. US Patent Application No. 2002/0167953 and US Patent No. 6,445,711 discloses a local bus bridge to connect IEEE 1394 busses.
- e. US Patent No. 6,389,496 discloses a local bus bridge to connect IEEE 1394 busses.
- f. TSB12C01A Data Manual discloses dynamically adjusting the size of FIFO memories in an IEEE 1394 interface.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RYAN M. STIGLIC whose telephone number is (571)272-3641. The examiner can normally be reached on Monday - Friday (7:00-4:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 571.272.3632. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ryan M Stiglic/
Examiner, Art Unit 2111